



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR    | ATTORNEY DOCKET NO.       | CONFIRMATION NO. |
|--|-------------|-------------------------|---------------------------|------------------|
| 10/522,860   | 08/12/2005  | Thierry Bernard         | 930092-2009               | 4878             |
| 7590<br>Ronald R Santucci<br>Frommer Lawrence & Haug<br>745 Fifth Avenue<br>New York, NY 10151 |             | 02/20/2007              | EXAMINER<br>KNOX, STEWART | ART UNIT<br>3641 |
| SHORTENED STATUTORY PERIOD OF RESPONSE   |             | MAIL DATE<br>02/20/2007 | DELIVERY MODE<br>PAPER    |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/522,860             | BERNARD, THIERRY    |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Stewart T. Knox        | 3641                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 31 January 2005.  
 2a) This action is FINAL.                  2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-7 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-7 is/are rejected.  
 7) Claim(s) 2-7 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
     Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: Attachment A (1 page).

## DETAILED ACTION

### *Claim Objections*

1. Claims 2-7 are objected to because of the following informalities: it is not clear if claim 2 is intended to be a dependent claim on claim 1, or if it is intended to be independent. Further, stating that the device of claim 2 is “for implementing” the device of claim 1 appears unclear for the following reasons: the device shown in figures 2-8 and claimed in claims 2-7 appears to have one input and one output. There is no indication where a third connection might go, as is clearly required by the illustrated connectors (7, 8, and 11) in figure 1. Further, it is unclear whether the output lateral pins (21, 22, 23) would connect to the input electric cable (10) or the terminal cable (5a) for connector 11 (in the case of connector 7, the input would be 5a and the output would be 6a).
2. Appropriate correction and/or clarification is required.

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. The claims are generally narrative failing to conform with current U.S. practice. Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation (See MPEP 608.01(i)(i)).

Art Unit: 3641

4. Further, numerous awkward phrases exist which serve to cloud the meaning of the claims. For example, "this terminal part" and "at a point of the latter" in claim 1, "at least one comprises on the outside holding means" and "provided to this effect" in claim 3, and "the profile of the section of the electric cable" in claim 4. In addition, there are numerous recited elements of structure that lack antecedent basis, since they are referred to with a preceding "the" without having previously positively recited such an element. Examples include "the profile of the section of the electric cable" in claim 4," "the next detonator" and "the latter" in claim 1, and "the pushing surface" in claim 3. In addition, numerous references are made to a "cable" and an "electric cable," but it is not clear whether these are supposed to refer to the same elements or different elements (see 1<sup>st</sup> paragraph rejection above). As such, art will be applied to the best of the Examiner's understanding of the invention as claimed, but will inherently be limited by the aforementioned ambiguities.

5. The preceding list is considered exemplary and Applicant should thoroughly review the claims for compliance.

#### *Claim Rejections - 35 USC § 102*

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Ewick (5,714,712).

Ewick discloses a pyrotechnical firing installation comprising a plurality of detonators (30a-30d)

each with an electric cable (28a-28d) comprising at least two connection conductors (one on each end), and surface line (54) to which the cable of each detonator is connected, wherein the surface line is formed by sections (54a-54d), every section comprising a terminal or end part coming from a detonator and an end connector (24a-24d) to connect the cable to the next detonator at a point defining the origin of its terminal part.

8. Claims 1, 2, 4, and 5 are alternately rejected under 35 U.S.C. 102(b) as being anticipated by Wilson (4,770,097). Wilson discloses a pyrotechnical firing installation comprising a plurality of detonators (figures) each with an electric cable (figure 3, element 6) comprising at least two connection conductors, and a surface line (figure 3, element 20) to which the cable (6) of each detonator is connected, wherein the surface line is formed by sections (figure 3, including 20, 22, 24) comprising a terminal or end part and an end connector to connect the terminal part of the cable to the cable of the next detonator.

9. Further, Wilson discloses a connector for a detonator (figure 3, labeled as interpreted in Attachment A), wherein the connector comprises first and second parts, the first part solid with the end of the cable and provided with connection pins, opposite of which is a pushing wall, the second part having a slide and stop wall into which the first part is mounted movable in relation to the stop wall which faces the connection pins, the wall and slide defining a seat for receiving an electric cable oriented transversely to the cable. The profile of the section of the electric cable corresponds with regard to shape to the profile of the seat of the second part (in that they are built to connect to one another, so their profiles are similar), and the cable has a flat part and the seat has a corresponding flat surface, passed through by connection pins.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 3, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson as applied to claims 1, 2, 4, and 5 above, and further in view of Sutula (5,659,149). Wilson discloses the claimed invention except for holding means and a wedging bead. Sutula discloses a two-part connector for transferring blast initiation signals (figures 8 and 9), and discloses that it is useful to have flexible locking tabs (60) to connect the two parts and keep them from separating. In addition, Sutula discloses a lateral wedging bead (figure 12, element 66) used to define a slot for the incoming line and ensure that it does not accidentally become loose. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the connecting device of Wilson with flexible locking tabs and a lateral wedging bead as taught by Sutula, since such a modification would allow for a more secure connection between the two parts and reduce the likelihood of accidental disconnection.

***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stewart T. Knox whose telephone number is (571) 272-8235. The examiner can normally be reached on Monday through Thursday, 8:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on (571) 272-6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Stewart Knox

Troy Chambers  
Primary Examiner  
Art Unit 3641

02/14/07

Application/Control Number: 10/522,860

Page 7

Art Unit: 3641

# Attachment A

